SOLUTION SHOWCASE

Celanese

CELANESE CRASTIN® PBT HYDROLYSIS-RESISTANT PORTFOLIO ADVANCES SENSORS AND ELECTRONIC COMPONENTS FOR E-MOBILITY

The advancement of electric, autonomous, and automated vehicles relies in large part on more sensors than ever that monitor and control everything from powertrain to chassis components. To support this transition, the Celenese Crastin® PBT HR portfolio is designed to meet the needs of manufacturers meet the needs of manufacturers making vehicles with sophisticated sensor systems and electronic components like switches, connectors, and ECU (Electronic Control Units). It delivers hydrolysis-stabilized PBT with stable electrical properties under high-temperature and humidity conditions.

Crastin® PBT HR products adapt to a broad range of requirements for safety, efficiency, and connectivity.

CRASTIN® PBT HR PORTFOLIO – MAIN FEATURES

Grade	GF Content	Impact Modified	Flame Retardant	Laser Marking	Laser Transparent
HR5315HFS NC010	15	✔			✔
HR5315HFS BK591	15	✔		✔	
HR5330HFS NC010	30	✔			✔
HR5330HFS BK591	30	✔		✔	
HR5330HFS OR516	30	✔		✔	
HR5430HFS NC010LT	30	✔			✔ (improved)
HR5430HFS BK238LT	30	✔			✔ (improved)
FRHR5315NH NC010*	15		✔		✔
FRHR5315NH BK591*	15		✔	✔	
FRHR5315NH BK219LT*	15		✔		✔
FRHR5325NH NC010	25		✔		✔
FRHR5325NH BK219LT	25		✔	✔	
FRHR5325NH BK591LM	25		✔	✔	
FRHR5325NH OR162	25		✔		✔
CRAFRHR5315NH BK591LM	15		✔	✔	
CRAHR5430HFS BK591LM	30			✔	

* Developmental Source: Celanese

ROBUST MATERIALS FOR DEMANDING SENSOR CONDITIONS

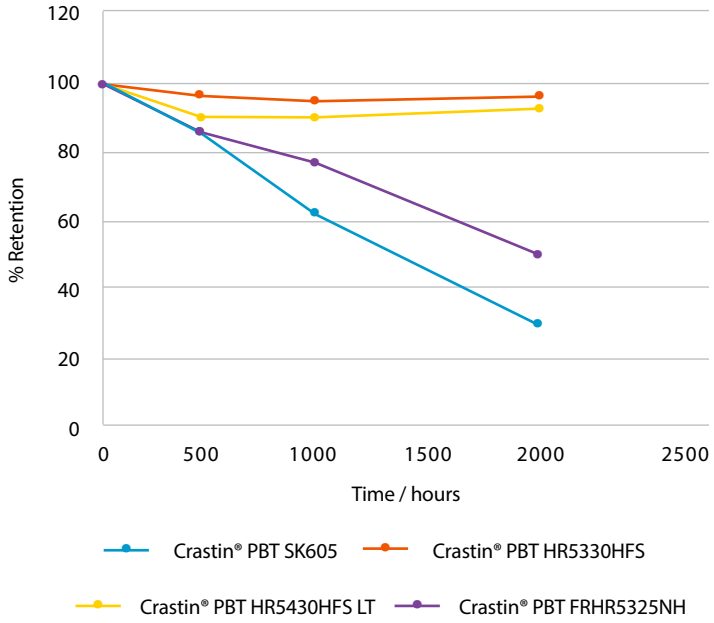
Sensors must be robust enough to perform under demanding conditions. Sensor housings made with Crastin® PBT HR materials are reliable when exposed to oils, high temperatures, and high humidity. They also can be laser welded without compromising electronic components contained within the housing.

The Crastin® PBT HR family includes multiple grades with different glass fiber levels that all provide hydrolysis resistance that extends component life and enhances vehicle reliability.

Car manufacturers and suppliers turn to Crastin® PBT HR products for:

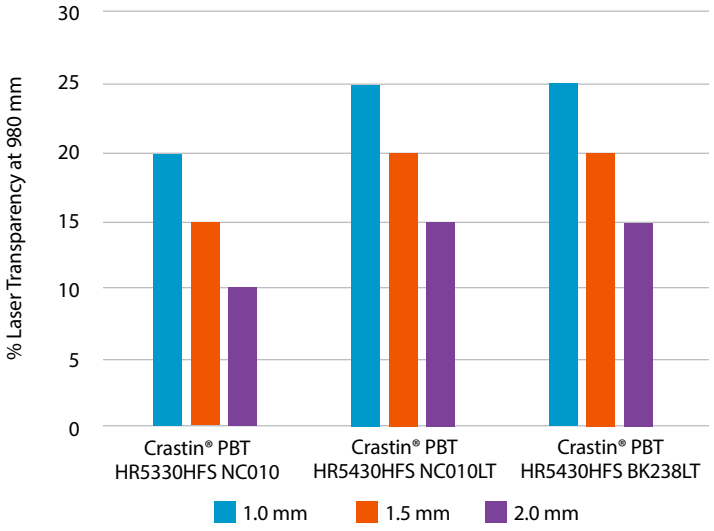
- Grades meeting OEMs hydrolysis-resistance requirements (e.g. USCAR2 and 85°C/85% relative humidity tests)
- Laser-markable grades for part identification through QR or DMC codes
- Good flowability and improved laser transparency for high productivity and ease of assembly
- Best-in-market CTI and dielectric properties under high-temperature conditions allowing design flexibility, miniaturization, and high-voltage applications
- Non-halogenated, flame-retardant materials
- Easy processing due to excellent melt viscosity stability

RETENTION OF STRESS AT BREAK AFTER 85°C, 85% RH EXPOSURE



Source: Celanese

LASER TRANSPARENCY STUDY AT DIFFERENT THICKNESSES



Source: Celanese

CRASTIN® PBT DELIVERS COST-EFFECTIVE HIGH PERFORMANCE

With more than 100 grades, Crastin® PBT is the resin of choice for cost-effective high performance across a wide range of industrial applications.

Designers, engineers, and manufacturers rely on Crastin® PBT for stiffness and toughness, superior electrical insulation properties, and exceptional surface finishes.

Crastin® PBT is also preferred for its excellent dimensional properties and stability versus moisture as well as its heat resistance. It enables Celanese to offer the industry's largest portfolio of EIS pre-approved by Underwriters Laboratories (UL) grades and recognized to IEC standards.

Celanese Crastin® PBT offers manufacturers the advantage of superior flow qualities. It's easy to process on conventional injection molding machines. Plus, it's available in a wide range of grades designed for low-warpage, hydrolysis resistance, and for blow-molding and extrusion.

With Crastin® PBT, Celanese materials science experts help customers gain cost efficiency without compromising on performance.

For more information, contact your Celanese representative.

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